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STRONG EYES

HOW WEAK EYES MAY BE STRENGTHENED AND SPECTACLES DISCARDED.

BY

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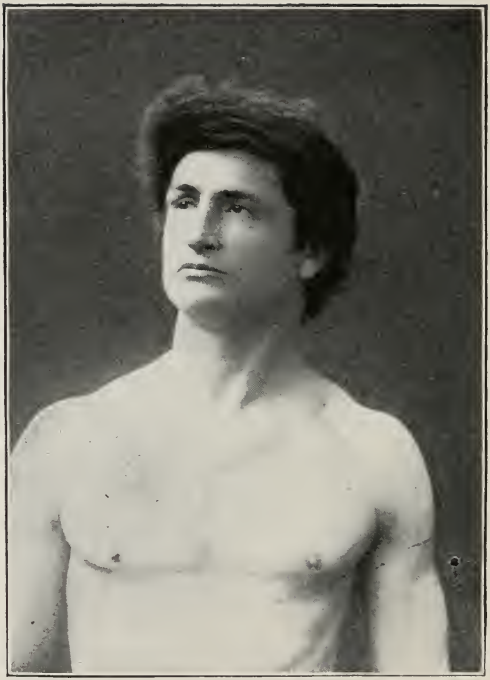


"Oh, loss of sight, of thee I most complain!"
—*Milton.*

PREFACE.

Who can estimate the value of eyes "the windows of the soul?"

If one were to be offered the wealth of the world in exchange for his power of vision the proposition would not be attractive.

Notwithstanding the enormous value of this power everywhere, in every walk of life, the eyes are ill-treated and subjected to intemperate use.

This common abuse of these valuable organs has caused spectacles, the eye crutches to be used, almost universally

while absolutely nothing is known of natural means for remedying these visional defects.

I believe that the information furnished here if acted upon will not only save thousands of sufferers from the necessity of wearing glasses, but those now using this artificial and ultimately injurious aid to the eyes will be able to cast it aside.

Strong eyes, like strong arms, can be developed and the contents of this book will tell how such results can be secured.

"Eyes that shame the violet,
Or the dark drop that on the pansy lies."
—*William Cullen Bryant.*

CHAPTER I.

THE EYES.

Of all the organs of special sense possessed by man the eye is by far the most important. Indeed the superiority is so universally recognized that sight is taken as representative of sense perception in general. A man is said to view a subject told him by word of mouth. He "sees a point" rather than feels it. Even odors and tastes are described by sight symbols. Per-

fumes are alluring, and the victim of the tobacco habit is said to awake in the morning with a "dark brown taste in his mouth."

Many other animals than man have other senses than sight in preeminence. Smell is so highly developed in a dog that scientists declare that the sleeping hound following his imagined quarry dreams mainly if not entirely of scents. The cat with all of its marvelous adaptation of the eye for hunting by night locates its prey by hearing even more than by seeing. But man depends for material perception far more on sight than any other sense. He tests everything by it. "Seeing is

knowing" and "seeing is believing" are proverbs even recognized by law, where actual sight of the perpetration of a crime is considered necessary to verify the evidence of a witness.

The reason for this preeminence is to be found in the highly developed physical structure of the eye, more specifically in that of the optic nervous system. This system is the real eye. What is commonly known as the eye is only the eye ball, which is simply the terminus of the system. Its marvelous structure is, after all, merely the end of a nerve, developed through countless ages of natural selection just as an eye of a cuttlefish, is a

special evolution of skin structure.

Consequently proper treatment of the eye should include the whole optic system, instead of the eye ball alone, as is commonly the case.

And, as treatment for nervous disorders largely depend on that which influences the whole body, the hygiene of the eye, is therefore principally constitutional. The optic nervous system is the real eye. The parts of the eye ball, the mere mechanism, may be replaced by artifice. Spectacles or lenses supplement, even wholly perform, the office of the natural "crystalline lens." The "aqueous fluid" also has been replaced by

water. But only the processes of nature can resupply or rebuild lost or diminished nervous energy. It is therefore out of place in this treatise to discuss the mechanism of the sight more than to mention some of the latest scientific conclusions. The reader, who may be interested from a purely educational point of view can study the anatomy and physiology of the eye in any school text-book.

Suffice it to say that the images of objects pass through the crystalline lens of the eye and project their outlines upside down upon the retina. The light vibration forming the image on the retina is transmuted into nerve vibration

and telegraphed to the brain-cent where the sight function is localized. If the nerves and brain are healthy, fully and normally developed, the impression will be accurate, but if otherwise it cannot be depended upon with any degree of certainty.

Owing to the intimate connection of the eyes with the whole nervous system, passing emotions are very clearly indicated by the expression of the eyes. "The love-light in the eye" has been the theme of amatory verse of all ages and times. The various colors of the pupils have been said to indicate diverse characteristics. It was Thompson Moore who wrote:—

"The brilliant black eye
May in triumph let fly
All its darts without caring who feels 'em;
But the soft eye of blue,
Though it scatter wounds, too,
It much better pleased when it heals 'em."

The eyes are capable of expressing not only general emotions and broad traits of character, but also ideas and specific thoughts. Not only figuratively, but literally some people "talk with their eyes."

In this accomplishment the Orientals are especially proficient. Secret information of a proposed conspiracy has been communicated from one native to another, by the eyes alone, even in the presence of Englishmen.

There is no feature of the humane physiognomy that gives a

more clearer indication of character than do the eyes. Give Brutus the furtive eyes of "lean and hungry" Cassius, gentle Ophelia the passionate, burning orbs of Lady Macbeth, and what a change is wrought. We read of the clear and piercing glance of Cardinal Richeleu, the "penetrating stab of the eyes of Bonaparte; the mystic-dreaming eyes of Swedenburg and we feel that the eye described stands for the man—is the true index of his character.

To the eye then, we can search for aid in estimating character, and the hygienic measures adopted to improve the one cannot fail to correspondingly strengthen the other.

"I look upon the fair blue skies,
And nought but empty air I see;
But when I turn me to thine eyes,
It seemeth unto me
Ten thousand angels spread their wings
Within those litte azure rings."

—*O. W. Holmes.*

CHAPTER II.

BEAUTIFUL EYES.

"Age cannot change nor custom stale Her infinite variety."—Thus wrote Shakespeare of Cleopatra, the most beautiful woman of ancient times. The great Caesar fell prey to her charms, and in her wondrous Egyptian eyes Mark Antony read the secret of his destiny. From

the testimony of contemporary historians we learn that the chief charm of the wonderful women lay in the mysterious splendor of her eyes. Dark, lustrous, large they mirrored the placid twilight of the Egyptian days, or the passionate burning of the noonday sun. But not only were her eyes the windows of Cleopatra's emotive nature; they as well expressed the fire and vigor of an intellect unsurpassed in brilliancy and resource by any ancient or modern queen. The mistress of a dozen tongues, versed in the lore of the ancient philosophies, High Priestess of Isis and Osiris, we are told by Plutarch that her eyes, even more adequately than

her tongue, gave expression to the brilliancy and versatility of her mind.

Wherein this wonderful power of expression consists, physiologists have never been able to determine. Like beauty in its various manifestations, by its very elusive mystery it charms as it bewilders us. Many theories of the beautiful have been advanced by philosophers at various times, but in no instance have they been able adequately to explain *how* or *why* certain combinations of colors and of form should excite pleasant rather than unpleasant sensations. And this is specially true of the eyes. The most delicate instru-

ments might not be able to establish a perceptible difference in color, form or size of two pairs of eyes, and still one pair might be considered beautiful and the other homely.

But if we leave the consideration of abstract beauty to the student of aesthetics, and take it from the simpler ground of practical hygiene, many very substantial essentials to beautiful eyes may profitably be considered. The eye to be beautiful must be clear. It must be free from defects—myopia, obliquity, astigmatism. The lashes must be of a proper length, the lids healthy and the whites free from the discolorations of impure

blood. A perfect digestion, a healthy and energetic circulation of the blood, a delicate nervous poise, are all physical prerequisites to beautiful eyes. Form, color and size, however important in themselves, avail nothing without the lustre and brilliancy and expression imparted by general physical tone, and though the shape and color of the eyes can never be changed, they can be greatly improved in strength and appearance by the rational system of constitutional and hygienic treatment to be considered later.

In concluding this chapter it may be well to also mention that not only does the eye give express-

ion to traits of character, as stated in a preceding chapter, but no development of character is possible without a corresponding development of the power of expression in the eye.

"Don't trust that man" you often hear one person say of another; and in answer to your demand for a reason you are told "that he never looks one straight in the eye." Children especially are usually able to read correctly the character from the eyes, while criminologists and alienists tell us that the criminal and the insane can be invariably be recognized by a peculiarly furtive expression of the eyes that they cannot disguise even

by the greatest cunning.

On the other hand the value of the eye to actors, and orators is universally conceded. Who has not read of the flashing eyes of Patrick Henry? of Webster, Calhoun & Clay? While one of the most striking and remarkable plays on the stage to-day is dependent for realistic effect upon the wonderful ability of the actor to transform, in the presence of his audience and without resorting to extraneous aids, the mild and gentle eyes of Dr. Jekyl to the cruel and devilish eyes of Mr. Hyde.

"Sight is priceless, and for this reason when the eyes need help they need the best help."—*Prof. J. H. Greer, M.D.*

"Millions of eyes are rendered miserable to look upon, or from, by the drugifications of doctoring, washes, lotions, leeching, blistering, bleeding, calomelizing, etc."—*R. T. Trall, M.D.*

"Look on his eyes, and thou wilt find
A sadness in their beam,
Like the pensive shades that willows cast
On the sky-reflected stream."

—*Eliza Cook.*

CHAPTER III.

STRONG EYES.

There is no evil that has accompanied modern civilization so closely as that of weak eyes. Along with the growth of the newspaper from a four-paged, four-columned sheet printed with large type, to the sixty-four page "Sunday Edition" printed on inferior paper, and frequently with very small type, has appeared a progressive

degeneration of the visual powers. It is "the reading habit" that has also called attention to this weakness of the eyes, and cheap poorly printed literature has had much to do towards producing this condition. The progress of science that has for its object the study of abnormal manifestations, the application of greatly complicated methods in consideration of such phenomena, is likewise partly responsible for this condition of affairs. For as the body of science has increased in magnitude, further knowledge along these particular lines has been acquired only by the development of various specialties wherein the individual inves-

tigator concentrates his powers upon a certain line of research to the exclusion of all other knowledge. As a result life in all its abnormal details has been analyzed and dissected as never before in the history of the world, with the further result that things have been magnified and distorted out of all relation to each other. This microscopic scrutiny of things abnormal and the neglect of the normal have developed what may be called the corrective treatment as opposed to the preventative treatment in remedying diseased conditions. Thus handicapped, men of science do not treat causes except in the light of effects. They

have followed the erroneous conclusion that the elimination of effects is the same as the destruction of causes; that corrective remedial agencies are efficacious even if they ignore the causes, and the fact that there is an ever active tendency in the body to cure itself if allowed an opportunity is almost universally ignored.

As a consequence of this error, we find in this special line, not only adults but children depending upon artificial means for relief from the effects of imperfect vision. Instead of prescribing a rational constitutional treatment for weakness and defects of the eyes—absolutely the only means that can bring

about a proper adjustment of nervous system of which the sense of sight is an important part—the "specialist" recommends the employment of local correctives, the final effect of which is to permanently impair if not absolutely destroy, the organ subject to such treatment.

In illustration of the inefficacy of the local corrective treatment, may be cited the name of Charles Broadway Rouss, the Merchant Prince, and Joseph Pulitzer, Editor and owner of the New York *World*.

The case of Mr. Rouss is particularly interesting. From the beginning of his trouble he has consulted the greatest specialists

in the world, he has employed an "understudy" upon whom all operations were performed to test their efficacy before being tried on himself. He has offered fabulous sums to anyone who could save him from total blindness, but without avail. With his body gradually weakening, not only his muscular system by his entire nervous organization gradually deteriorated. The blood under these circumstances loses its virility and healing power and in his case a decadence of visual power began that no treatment ever benefited for the reason that the necessity for up-building the entire bodily structure was never recognized.

Milton blind could scarcely appreciate the value of good eye sight to one living the strenuous life of to-day. The complexity of contemporary social life, the diversity of interests of the Twentieth Century, intellectual, industrial and artistic, were undreamed of by the greatest of Milton's time. Competition has never been so keen, the draft made upon the energies and capabilities of the individual has never been so great as at present, and he whose visual powers are threatened is indeed an object of universal commiseration. What is left for the blind when thousands of otherwise sound and capable beings are disqualified for the field

of labor by a comparatively trifling defect of vision? Should the entire male population of the United States make application for certain classes of railway employment, color blindness alone would disqualify at least five per cent. or more than two millions of people. If to color-blindness be added myopia, astigmatism and hyperopia, at least double that number would have to starve so far as our great railroad corporations are concerned. Nor is railroading alone the only field of labor from which the man of defective vision is excluded. A large army of men are employed in illustrating of various kinds; in the plants of corporations engaged

in the production of posters for advertising purposes to which may be added photographers, artists, landscape gardners and others, all of whom depend for their daily bread on unimpaired eyesight.

The magnetic power that many possess may likewise be traced to the same source. To sedulously care for the eyes should then be one's first duty. It is the first of all the organs of special sense. Before adopting any course of corrective treatment, every natural means of securing relief by strengthening the nervous system should be conscientiously tried. When satisfied that the cause of the trouble is not in the general

nervous system, other methods can then be tried.

"Her eyes are homes of silent prayer."
—*Tennyson, In Memoriam*

CHAPTER IV.

DULL EYES.

Nearly everyone has observed the peculiarly lustreless and expressionless condition of the eyes of an intoxicated person. They roll heavily and meaninglessly in their sockets, devoid of expression and fire. This proves most conclusively how intimate is the connection between the nervous system and the eyes. In fact the eyes like the tongue are a fair index of

the condition of one's stomach, whether that condition be induced by intemperate indulgence in drugs, liquor, tobacco, or by overwork, improper food or gormandizing.

If the functions of the various organs are properly performed blood is furnished to the eyes in all its purity. The eyes nourished with pure rich blood are brilliant, healthy and strong. But if the defecting organs are slow and torpid in their functions, a sluggish circulation of impure blood follows, and the eyes, along with the other bodily organs, grow weak and dull. Imperfect digestion and general nervous debility affect the power

of the eyes for usefulness as well as their appearance.—So true is this, that one may safely assert that nearly every case of defective vision not caused by intemperate use is made possible by the general debility of the whole system rather than the local causes usually blamed. The futility of applying local remedies thus becomes manifest. They fail to remove the cause of the trouble. To the true occulist the eyes should be, as in fact they are, the thermometer of health; and the first step in the diagnosis of every case submitted for treatment should be a careful investigation of the patient's general physical condition. If, upon

examination, it be found that he is suffering from pronounced general debility, the very first efforts should be directed towards the correction of that and towards the establishment of a healthy nervous tone.

A prescription consisting of a simple nutritious and obstemious diet, fresh air and exercise, together with the local and other treatment advised, will usually restore the eyes.

"His dark, pensive eye,
Speaks the high soul, the thought sublime,
That dwells on immortality."
—*Charlotte Elizabeth*

CHAPTER V.

WEAK EYES.

Leaving out physical weakness one of the chief causes of weak eyes is overwork. To persist in fine needlework when the eyes have registered a protest; to read fine print, or coarse print on inferior paper; to strain the eyes by attempting to read in a dim light, is but to court disaster for the visual

powers. Strained eyes like sprained ankles cannot be cured in a day, nor by the application of local remedial agents alone. Time, rest, general nervous relaxation, assisted by physical culture, dietetic and general constitutional treatment can alone effect a cure.

The eyes are weakened frequently by the cumulative effect of persistent abuses, and only by persistence in the opposite course can relief be secured. Let us take for instance the weak eye resulting from a disregard of optical requirements. Thousands of school children sit with the light pouring through uncurtained windows sheer into their eyes, week after

week, and month after month regardless of the well-known evil effect such a practice must inevitably produce. Even the most ignorant of amateur Photographers would not think of turning his camera towards the sun to secure acceptable impressions of even the largest of objects; but a silly and reckless school board will so arrange desks that it becomes necessary for the pupil to turn a far more delicate instrument directly towards the light of day in order to learn to read and write.

Just as the sensation film in a camera is impaired, if not ruined by the untempered rays, so the more delicate retina of the eye

suffers from the same cause. Fortunately the eye is able usually to recuperate, to repair the tissues abused, otherwise the injury would be immediate and irreparable. But even the recuperative powers of youth are frequently exhausted, and thousands of young people leave school with a defective vision that the simplest regards for light requirements might have made impossible.

As before stated, eyes are not weakened in a day, nor are they cured in a day. For years a mother sews by a dim inadequate light. She does not rest when they feel fatigued. At length her eyes give out. She consults an occulist, who

prescribes and furnishes spectacles and she considers herself cured. Little does she realize that she has but made use of a crutch for the eyes. For the time being they enable the eyes to continue their work with less effort, but at the same time the very condition they were prescribed to relieve is made chronic. The crutch becomes a permanent necessity and like the man who acquires the habit of using stimulants, the magnifying power of the glasses must be made gradually greater to accommodate the constantly increasing demand made upon them. The ultimate effect of all this in many cases is permanent weakness of the eyes

and not infrequently total blindness is ultimately induced.

As the treatment for dull eyes is fresh air, exercise, proper diet, and the adoption of rational hygienic means for constitutional upbuilding described and illustrated in succeeding chapters, so the proper measures to observe for remedying weak eyes are the same, supplemented by ample rest when the eyes are fatigued and a due regard for position and light requirements when the eyes are being used.

"Eyes that were fountains of thought and song."

—*Bayard Taylor.*

CHAPTER VI.

CRIPPLED EYES.

Eyes may be crippled in many ways. The excessive use of tobacco or any nerve stimulant will if long continued make them either dull or weak, and frequently both. Fine needlework, if persisted in after the eyes are irritated by fatigue, will impair the most perfect vision in a few months. Dim lights should also be avoided when

using the eyes. Reading when in a reclining position is said to be injurious, though if great care be maintained to properly adjust the light and book or paper, no serious harm should result from this. The light should fall directly on the paper and should be shaded from the eyes, though where the paper throws a strong reflection, care should be used to turn this away from the eyes, and as soon as the least fatigue is experienced, they should be given a few minutes rest by closing the lids. Pain is Nature's great danger signal, and when it is ignored serious weakness of the abused organs are sure to result.

Another important cause of crippled eyes is the use of glasses in order to read. They should be removed, invariably when not reading—in fact, should be worn as little as possible at all times. Eyes that are born defective, short-sighted, long-sighted, astigmatic, instead of being treated by rational, constitutional methods, both of hygiene and massage, are supplied with glasses. While this method temporarily relieves the inconvenience resulting from defective vision, it simply intensifies and makes chronic the defect in the end. The reason for this is plain. Under these abnormal conditions the blood is usually deficient in

the elements essential to the proper nourishment of the eye, and glasses are absolutely the worst remedy that can be adopted. Take the arm, for instance, and decrease the efforts required of the muscles and as a consequence the flow of blood to them decreases. The arm grows smaller and weaker day by day. Identically the same condition exists in the eyes. After glasses of a certain character are worn for a while, it becomes as difficult to see with them as it formerly was to see without them. The blood is not of proper quality or perhaps does not properly circulate through the tissues and nervous system of the eyes. They grow gradually

weaker. If the cause of your trouble is not removed glasses of still greater power must finally be used. Like one who is a slave to stimulants, the quantity or strength must be continually increased to bring about similar effects. Thus is the end defeated by the means employed and the defect that was to be remedied, if not made worse, is always made chronic by this false theory of treatment.

Among the numerous complications induced by the wearing of spectacles may be mentioned one which, though of interest to all, is of especial importance to women.

Spectacles destroy the beauty and expression of the eyes. Imagine Helen of Troy with glasses. Put spectacles on the Venus of Milo or the Apollo Belvedere! What could be more ridiculous? Spectacles lessen the power of the eyes to portray character, they take away the force and ardor from spoken words.

There is no excuse in the great majority of cases, for the wearing of glasses at all. Proper attention to the methods here presented for strengthening the eyes will in every instance ultimately bring about satisfactory results, though it would be well to remember that improvement must not be expected

in a day or two, or even in a week or two. In some instances a slight improvement may be noted in a few days, but ordinarily it will take at least a month of persistent treatment to show a decided change for the better.

"Thine eyes are springs in whose serene
And silent waters Heaven is seen."
—*Ib.*

CHAPTER VII.

DISEASED EYES.

There are many diseases of the eyes. Attention will be called to a few of the most common forms—how they are induced and how they may be cured.

Congestion of the conjunctiva of the eyes is often caused by exposing the eyes to the irritation of smoke, or even of strong winds. It is also occasioned by straining the eyes in looking at minute objects,

or by reading without sufficient light. Though it may apparently be brought about by any one of these local causes, the general physical condition has a great influence. If the blood is in a bad condition, full of impurities, it will take but slight irritation to produce inflammation, but if otherwise, the eyes can bear a great amount of ill usage without noticeable harm.

The value therefore of constitutional treatment in this trouble is important and suggestions in reference to this should be rigidly followed. In local treatment the eyes should frequently be given a bath in moderately cold salted water as described in chapter to

follow. This may be supplemented by the application of wet cloths to the eyes, changing them as frequently as occasion may require. The patient must rest the eyes as much as possible. Avoid reading in a poor light or straining the eyes with fine sewing or fine print. This practice often does much towards influencing the trouble, and the causes must be eliminated before a permanent cure can be affected.

Catarrh of the eye is the result of a prolonged continuation of similar conditions to those that produce congestion. Those suffering from this complaint, often feel as if sand were in the eyes. In the

early morning the lids are frequently stuck together so firmly that great difficulty is experienced in opening them. Constitutional and local treatment as advised for congestion with a complete rest for the eyes is unquestionably about the best treatment for this trouble. When the lids are swollen and the eyes red and hot, an eye bath in salted water may be employed to advantage several times a day. If inflammation is especially severe, a weak solution of sulphate of zinc, not over one grain an ounce of water may sometimes be used beneficially. Two or three drops should be allowed to fall into the eyes two or three times each day. Poultices,

eye waters, and remedies of that nature should all be avoided. Burning of the lids can nearly always be alleviated by an eye bath.

Trachoma, or granulation of the eyelids, is a condition in which the mucous membranes of the lids become thick and rough in consequence of little granular lumps on the lids. It is generally the result of improper treatment of the eye when inflamed, but more frequently arises from disorders of the stomach and liver resulting from improper diet, lack of outdoor exercise, etc. In treatment for this disease, the patient should observe the general rules for constitutional treatment, using the greatest care

in his diet, discarding tea, coffee and stimulants generally (including tobacco) and also fat meats and pastry. The more abstemious the patient is and the more simple and nutritious the food, the better. In the treatment of all these troubles the eyes should be carefully protected from very bright lights.

Styes are a very painful species of small boils that form generally on the edge of the eyelids. The disease usually follows the course of ordinary boils, and is nearly always brought about through constitutional causes, general debility a disordered stomach, etc. If treatment is begun at first sign of their appearance; they may be absorbed

without suppuration, but if well started relief may be secured more speedily by allowing them to come to a head. Usually they will open themselves when ready to discharge the pus, though in some cases relief can be secured more speedily by opening with a lance. A permanent cure can be affected only by adopting constitutional treatment. Pimples and tumors of the eye are nearly always produced by abnormal physical conditions, and can be cured by the same methods as advised in treating styes.

Spasm and twitching of the eyelids are spasmodic effections of the muscles that close the lids. They are due, chiefly, to general nervous

weakness, though the presence of foreign bodies in the eye will often cause severe spasms. When due to the presence of any irritating substance, the cause of course should be first removed; but when due to constitutional causes, the regular treatment for building up the general health should be adopted. The exercise of tightly closing the eyes should be taken frequently. The eye bath should be used two or three times per day.

Muscae Volitantes—Specks before the Eye. Frequently persons are annoyed by specks, or by what sometimes resemble cobwebs, floating before the eyes. This is due, as a rule, to the imperfect refrac-

tion of light by the vitreous humor of the eye consequent upon certain changes of cell structure. The only treatment for this complaint is to purify the blood and build by constitutional means. Rich foods, condiments, alcoholic drinks and tobacco, should especially be avoided.

Cross-Eyes—One is said to be cross-eyed when one, or when both eyes, turn in toward the nose. Specialists claim that in the majority of cases this condition can be entirely corrected only by a surgical operation; but in numberless cases excellent results are obtained by employment of constitutional treatment, massage and eye-

baths suggested later on in this work.

Diseases of the Cornea—Many diseases come under this head such as Paunus, ulceos and opacities of the cornea, etc. In nearly every instance affections of this character are directly traceable to constitutional causes, general debility resulting from poor digestion, over-indulgence in alcoholic liquors, excessive use of tobacco, etc. This being true, the treatment to be pursued suggests itself. It should be constitutional and rich foods, condiments, liquors and tobacco, should be discarded. This, with exercisers that tend to strengthen

and improve the nervous tone, will afford relief.

Diseases of the Iris—Iritis. This is a most painful disease, it being frequently confounded with neuralgia. The eyes become congested and the lids swollen. Feverishness and a want of appetite often accompany the disease. The pupils fail to expand and contract readily under the influence of strong light, and unless great care is taken the affection is likely to become chronic. The chief thing to be feared, in this disease, is permanent contraction of the pupil. This is best prevented by frequent eye-baths, a very abstemious diet and general constitutional treatment.

Application of hot and cold cloths alternately to the eye will usually assuage the pain. The patient should be careful not to use the eyes more than is absolutely necessary.

Diseases of the Pupil—Mydriasis —Myosis—These diseases, respectively unnatural dilitation and unnatural contraction, of the pupils of the eyes, may result from paralysis of one of the nerves of the eye, from rheumatism or from syphilis. Eye massage and eye-baths, in connection with the constitutional treatment recommended in this work, will do much to relieve this affection. Under any circumstances, the best that can be done

is to strengthen and improve the general physical and nervous condition, the great majority of these affections being attributable more to general debility than to any specific local cause.

Cataract—This is a disease during the course of which the crystalline lens gradually loses its transparency. Eventually total blindness is the result. There is supposed to be no remedy for this disease but the surgeon's knife, although persistence in constitutional methods of treatment with frequent eye-baths will no doubt remedy the trouble if commenced in the early stages.

Diseases of the Choroid, Retina and Optic Nerve—Diseases of these structures are generally caused by the excessive use of alcoholic stimulants and tobacco. Use of them should be dispensed with and every effort should be made to improve the general health and physical tone. Little if any improvement can be expected from any other than the constitutional treatment recommended in these pages.

Miscellaneous Diseases—By carefully reading the description of the particular treatments advised for the various weaknesses and defects of the eyes you will note that they are almost identical. If the blood is purified, the entire nervous sys-

tem strengthened and the system of special eyes exercises taken regularly in combination with the eye-bath and massage no matter what may be the defect or weakness of your visual powers, gradual recovery is almost certain, and any defects of the eyes that I may have failed to mention can be treated locally and constitutionally as here advised with almost absolute surety of ultimate recovery.

"Those eyes—among thine elder friends
Perhaps they pass for blue;
No matter—if a man can see,
What more have eyes to do?
—*O. W. Holmes.*

CHAPTER VIII.

CONSTITUTIONAL TREATMENT.

The subject of constitutional treatment for strengthening the eyes, though a gradual strengthening of the nervous system by building up the general health, is a very extensive one. Only a few of the most important facts in reference thereto can be mentioned here. For more extensive information

along this line would refer the reader to "Strength from Eating" and other books of mine that treat the subject more in detail. But in order to make this treatise complete in itself, the most salient points of the method recommended will be stated.

It requires more energy to be sick than to be well. If one is strong enough to resist illness and live, he is strong enough to recover normal health. In order to bring about this result, to take exercise of some kind is necessary. Outdoor exercise is, without question, the best. It builds muscular and nervous tone by purifying the blood and accelerating the circula-

tion; assists the digestive processes and strengthens the entire nervous system. It is often difficult for one to secure all the advantages arising from an out-door life, and some complete system of exercise for developing and strengthening all parts of the body should be used daily. Open the windows wide to the light and air when exercising. Do not fear cold air. There is little danger of catching cold when exercising, no matter how strong the draught may be. And the smaller the amount of clothing worn during these exercises, the better will be the results attained. Clothing not only interferes with the muscular movements, but it

lessens the tonic effect of the air upon the skin. The exercises should be as simple as possible and still effectively use all the muscles. Each movement can be practiced until a slight feeling of fatigue is experienced.

It should be always borne in mind that however beneficial indoor exercise may be it can never replace out-door exercise.

To obtain the full benefit from exercise, daily walks in the open air are emphatically insisted on. Remember that no matter what kind of a contest an athlete may be training for, he always considers long walks a necessary part of his training. Walking seems to have a

peculiarly strengthening effect upon the vitalforces, making more vigorous and healthier every part of the body. Therefore do not under any circumstances neglect this all-important factor—long walks in the open air. When taking these walks it is advisable to wear as little clothing as possible consistent with warmth and a due regard for the conventions. The air should come into direct contact with the body as much as possible, in order to secure the full benefit of the tonic effect. Furthermore clothing interferes with the free movements of the limbs and muscles, thus vastly decreasing the beneficial effects of exercise. But under no

circumstances should a vail be worn. There are countless instances of serious impairment of vision from the use of this article. Of course whenever possible these walks can be taken in such games as golf, tennis, and the like. In taking these walks, energy and life should be given to every movement. One should walk as if there was an object in view. If you have no object try and make one. In fact, the more play spirit that can be introduced into your exercise, the more pronounced will be the benefit. In walking, keep the shoulders back, the chest high, and at frequent intervals inhale deeply, expanding the chest to its fullest

proportions. An excellent exercise is to inhale to the limit and after a moment's pause, to exhale still more, emptying the lungs as much as possible. Then inhale, filling the chest to its greatest capacity. If this practice be persisted in, to keep warm will be an easy matter, even though lightly clothed. Under these circumstances, the inhalations will be deep and full and the quantity of oxygen supplied to the blood to generate warmth will be vastly increased.

In connection with the exercise suggested, baths, taken at regular intervals and with sufficient frequency, will be found beneficial.

The skin is covered with innumerable little pores which continually exude poisonous matter. If they become clogged or unable to perform properly their functions, the system is called upon to find other means to eliminate these impurities. The result of this is not infrequently a complication of serious diseases. The quantity of fluid matter daily exuded by the skin is no small item and the necessity for frequent baths becomes manifest. At least two or three hot baths should be taken every week, plenty of soap being used in these occasions, and the skin should be rubbed thoroughly so all extraneous substances will be

removed. One should not remain in the water over ten or fifteen minutes. The best time for hot baths is after exercising and immediately before retiring, as the feeling of lassitude following a hot bath tends to quickly induce sleep. Do not remain in the water too long when taking a hot bath as the effects are often quite enervating under such circumstances.

Cold baths, on rising in the morning, will be highly beneficial in many cases. It is not wise to leap from the warm bed into a freezing bath without preparatory exercise. Extremes of all kinds should be avoided. One should exercise vigorously immediately after

leaving the bed, and when the body is in a glow, the bath can be taken. The use of cold water in this way is a great tonic if the recuperative powers are able to react from the shock of the cold water.

If there is still a disinclination to a cold plunge after the exercise, the shock can be greatly lessened by taking a preliminary sitz bath for about thirty seconds, wetting the body all over afterwards. Cold baths of all kinds should be followed immediately by a vigorous rubbing with a rough bath towel until perfectly dry and warm. If after a bath and thorough rubbing there is the least feeling of chilliness, one should exercise until

warm. If artificial heat is used under these circumstances the natural reaction of the system from the shock often fails to appear, and one may feel cold for hours under these circumstances.

It is remarkable how little is known in reference to dietetics. The appalling ignorance of the masses in regard to this vastly important subject unquestionably results in numberless diseases. From the stomach and intestines the whole body draws its nourishment, and if the food supplied is not thoroughly masticated and is not of a character easily converted into life and strength giving elements, the entire organism suffers and falls easy

prey to diseases. To properly treat the subject of diet would require a large book and for fuller information I would refer to my book previously mentioned. I shall outline a few general principles so my reader can proceed without a further study of diet if he so desires.

There is nothing that outrages the stomach more than the habit of crowding food into it when taste or appetite rebels. One should eat when he is hungry, and at no other time, and though I believe that two meals a day are better than three or more, each individual must decide this for himself. Always remember however, that regularity

in relation to the appetite, and not regularity in relation to the clock, should be rule. But regardless of the number of meals eaten each day, the food must always be masticated until it becomes a liquid before swallowing. The act of swallowing will then follow involuntarily. Further, one should never overeat. If the digestive capacity is exceeded at one meal, it is better to omit the meal following in order to give the stomach ample time to rest after disposing of the overload. In fact, in starting the constitutional treatment for the eyes here recommended it is well to adopt a very abstemious diet for at least a short time, as beneficial results are

realized very much more quickly under these circumstances. For instance, I should advise that instead of eating three meals a day, the diet be confined to one or two. If two meals the first can be eaten at noon, the second in the evening. Do not eat the last meal too late for digestion to be nearly completed before retiring. A good appetite is particularly necessary in the beginning of this treatment. Everything eaten should be thoroughly enjoyed and masticated. Ample time should be allowed between meals for the thorough absorption of what has been eaten before additional food is consumed. No especial improvement in the gen-

eral health, or in the condition of the eyes can be expected unless this injunction be duly regarded. It may be well to add that meats or rich foods of any kind should not be too heartily indulged in, and rye, graham or whole wheat breads should be given the preference over the white bread commonly used.

After persistence for some time in the treatment above outlined the muscles will become stronger and more developed; the general health will be better, and the nervous tone will be greatly improved, and the weakness of the eyes will begin to gradually disappear. It must be clear now to the reader how this treatment must inevitably benefi-

cially affect the eyes. The eyes, like every other part of the body, are nourished by the blood, in fact depend absolutely and unqualifiedly upon the character and quantity of the blood supplied to them for their health and efficiency. It naturally follows that if the blood furnished be free from impurities and rich in nourishment, and in sufficient quantity, the eyes will be strengthened and brightened and greatly improved in every way. In the absence of these conditions, it cannot reasonably be expected that either the eyes or any other organs of the body will adequately meet the requirements imposed upon them by the strenuous life of to-day.

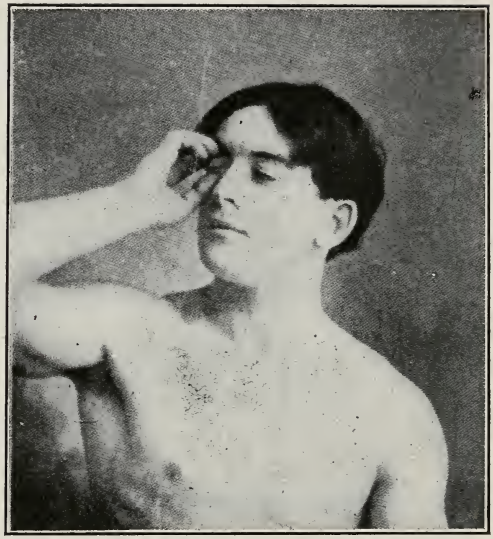
CHAPTER IX.

MASSAGE OF THE EYES.

Supplementary to the method of treatment herein advocated for strengthening the eyes by improving the general health and nervous tone, the practice of eye massage has considerable value. The beneficial effects of massage for all parts of the body is universally known. It was employed for centuries as an invaluable aid to the successful treatment of many forms of disease. It accelerates the cir-

culation of the blood and has a tonic effect upon the nerves. "The professional beauty," so called—women whose sole object in life is to be beautiful—lays the greatest stress upon the value of massage as a preservative of health and beauty of face and form, and one of the most important duties of the professional athletic trainers is to rub and knead the bodies of their charges. Why, then should massage not be of equal value in the treatment of the eyes? Of course it is difficult for one to massage the eyes as one would a muscle, but unquestionably they can be strengthened and beautified by the massage process. Massage of the

body accelerates the circulation of venous blood, replaces exercise to a certain extent by assisting the system in the elimination of impurities that would have a deleterious effect upon the general health if allowed to remain. Massage of the eyes, of course, would have a similar affect, accelerating the circulation of blood in the organs of sight, thereby strengthening and beautifying them. Of the many devices on the market for applying the massage treatment to the eyes, many no doubt are valuable; but the means herein illustrated will prove generally satisfactory. The



Massaging the muscles of the eyes. Press finger and thumb around socket of eye, pressing as lightly as possible on eye-ball, endeavoring to massage the eye muscles.

chief advantage, if any, of mechanical appliances for this purpose is the suction process, which they employ. Exhaust cups are placed over the eyes and the blood is by this means drawn in increased quantities to the parts. But the process of massage with the fingers effects practically the same result, as the blood is forced along by the gradual change of pressure, whereupon new blood flows in to replace that which has been forced along. The massage treatment should follow the eye exercises. If the influence of the massage is at all disagreeable it should be taken only very lightly and for a few moments only.

"Never allow strong medicines to be used in the eyes, such as nitrate of silver, sulphate of copper, acetate of lead or the various preparations of calomel. We have seen eyes destroyed in a few hours by poulticing for some insignificant disease of the cornea."—*Prof. J. H. Greer, M.D.*

CHAPTER X.

EYE EXERCISES.

The exercise of the eyes themselves, or rather the muscles which control the eyes, the reader will readily understand must necessarily have a strengthening influence upon the sight. It draws the blood to them and increases their virility by enabling the eyes to secure more and a better quality of nourishment. Each one of these exercises should be taken as illustrated, giving very careful attention to the instructions accom-

panying each exercise. Whenever the slightest feeling of fatigue is induced, the exercise should immediately cease, and after resting a few moments the next one should be attempted. Each exercise can usually be taken from ten to twenty-five times. GREAT CARE SHOULD BE USED NOT TO OVERDO THEM THE FIRST FEW TIMES. They should be taken once each day, morning or evening, and should always be followed by slight massage and the eye bath.

Look far to the right, then far to the left

Close eyes tightly as possible several times.

Turn eyes from obliquely upward to the right to obliquely downward to the left. Variation: Roll eyes in a wide circle to the right.

Look far upward; then far downward.

Turn eyes from obliquely upward at the left to obliquely downward at the right. Variation: Roll eyes in a wide circle to the left.

Look straight forward and try to clearly distinguish the smallest details of objects at a distance.

CHAPTER XI.

EYE BATH.

Following the massage, the eyeballs themselves should be carefully bathed in salt water to complete the treatment. The water used should be of the temperature of that drawn from a hydrant or well. The eye bath can be taken with a cup made for that particular purpose, but the really best method is to fill an ordinary bowl half full of water and then to stir in one heaping tablespoonful of salt until thoroughly dissolved.

The Eye Bath. Ready for the plunge.

EYE BATH

Hold the breath, immerse face in water and open and close the eyes several times while under water.

Then hold the breath, immerse the face in the water and open and close the eyes several times, allowing the eyes to remain in the water as long as the breath can be held. This should be repeated at least two or three times.

These methods supplementary to the general system of treatment for strengthening and beautifying the eyes, if sedulously and conscientiously practiced cannot fail to prove highly beneficial, and where one has acquired the habit of wearing glasses, should make it eventually possible to entirely discard them.

Of course this cannot be done at once. It will take time. How long

one must persist in the treatment here prescribed before being able to dispense with spectacles, will depend upon a number of causes, chief among which is the general condition of the health and the eyes when the treatment is begun.

If the eyes have been abused for years and years, one can hardly expect the trouble to be corrected and the eyes made strong in a few days or even a few months. It is slow process, but if as has been repeatedly emphasized, the methods herein suggested be earnestly and carefully followed, restoration to a condition of normal health must be only a matter of time.

CHAPTER XII.

SPECIAL EXERCISES.

I present herewith illustrations of a few special exercises the effect of which is to strengthen and accelerate the circulation to the muscles of the neck.

These exercises will usually develop the muscles quite materially in a short time. They are by no means an absolutely necessary adjunct of the treatment. They are

simply a slight aid as the strengthening of these muscles draws more and richer blood to them, and in addition the eyes are unquestionably strengthened sympathetically. It would also be well to note that the exercise of the chewing muscles necessary in the thorough mastication of foods will be of aid in adding strength to the eyes. As these muscles approximate perfect condition, the blood also nourishes the adjacent organs and tissues, bringing about in them a corresponding improvement.

Each movement here given should be taken until a slight feeling of fatigue is induced, great

care being taken not to overdo the exercises when first begun. In the event of soreness of the muscles from over-exercise a thorough rubbing of the parts effected will materially lessen the stiffness and inconvenience resulting therefrom, although independent of any treatment, the soreness will disappear in a few days.

While pressing with hand against head bring head from far to the left to far to the right. Same experience at other side.

While pressing against forehead bring head from far backward to far forward.

Turn head from far to the left to far to the right.

While pressing downward on bowed head bring head upward and far back.

CHAPTER XIII.

EXERCISES FOR CONSTITUTIONAL TREATMENT.

These exercises here illustrated can be taken nude in the morning or just before retiring. The will be found of especial value in assisting to build constitutional vigor.

Do not forget the necessity of fresh, pure air, and see that the windows are wide open.

Continue each movement until slightly tired.

If you have an exerciser, or are following some good system of exercise similar to that of the writer's with device made for that particular purpose, there will be no necessity for taking these movements. The course with the apparatus can take its place.

Do not forget that the less clothes worn during the exercise the better. Exercise vigorously, put vim, life, energy, determination in every movement, every effort.

Exercise No. 1.—Assume position as per Fig. 1. Hold elbows at sides, and raise hands up and down quickly forty to sixty times. Now draw in full breath, all you can, and hold it while you

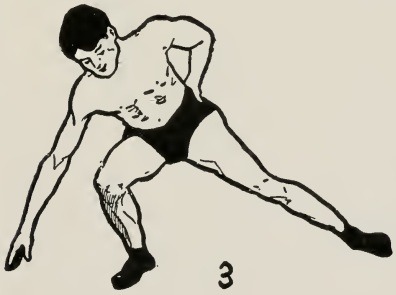
make twenty movements. Repeat three times. Now flex the muscles of arms, and imagine you are lifting a very heavy weight, and bring hands up and down very slowly. This is for developing the arms.

Exercise No. 2.—Assume position as per illustration No. 2. Draw in deep inspiration, all you can. Now hold this breath, and, keeping elbows rigid, swing arms quick and

strong, far backward and forward on a level with shoulders as long

as you can conveniently retain the breath. Repeat until tired. For expanding the chest and increasing lung power.

Exercise No. 3.—Stand erect, with feet far apart. Now touch the floor far to the right, as per illus-



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tration; then far to the left. Repeat exercise from ten to twenty times.

Exercise No. 4.—Assume position as per illustration No. 4. Keep knees very rigid, raise hands high

as you can over head with elbows rigid, from fifteen to twenty-five times. For strengthening the back.

Exercise No. 5.—Strongly brace yourself as per illustration No. 5. Now strike out hard and quick

with right and left hands alternately, reaching out as far as you can at each blow. Continue until tired.

Count each time, to see how much you improve in endurance.

Exercise No. 6.—Lay flat on the floor, hands on thighs. Now raise to a sitting position, keeping the feet on the floor. If you have diffi-

culity at first in holding the feet on the floor, place them under a sofa or chair. If the movement is too difficult even then, place one hand on a chair to assist your rising.

Complete the exercise by taking ten full, deep breaths before an open window. Throw should

ders far back and hold each breath about twenty seconds. Always breathe through the nose.

Do not forget the necessity for a walk of about two miles at a fast gait, (not immediately after a hearty meal) increasing the distance for a quarter of a mile each day until you are walking six miles per day. During this walk draw in many deep breaths, occasionally retaining breath for a moment, drawing shoulders up and back as far as you can and holding them in this position. While holding the shoulders thus contract the muscles of the arms and chest as tensely as possible.

Conclude the movements here

illustrated each time with a jumping exercise similar to jumping a rope, and, if strong enough, jump back and forth over some obstacle.

Do not forget to take a hot bath, with plenty of soap and water, two or three times per week, after evening exercise, preferred.

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